

**METHOD AND SYSTEM FOR EVALUATING
CARDIAC ISCHEMIA BASED ON HEART RATE FLUCTUATIONS**

5

Abstract

A method of assessing cardiac ischemia in a subject to provide a measure of cardiovascular health in that subject is described. In general, the method comprises the steps of: (a) collecting a first RR- interval data set from the subject during a stage of gradually increasing heart rate; (b) collecting a second RR- interval data set from the subject during a stage of gradually decreasing heart rate (e.g., after an abrupt stop in exercise; during a stage of gradually decreasing exercise load; etc.); (c) separating fluctuations from a slow trend in the first RR- interval data set; (d) separating fluctuations from a slow trend in the second RR- interval data set; (e) comparing the fluctuations of the first RR- interval data set to the fluctuations of the second RR- interval data set to determine a difference between the fluctuation data sets; and (f) generating from the comparison of step (e) a measure of cardiac ischemia during stimulation in the subject, wherein a greater difference between the first and second data sets indicates greater cardiac ischemia and lesser cardiac or cardiovascular health in the subject.

20